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EXAMINER	
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ART UNIT	PAPER NUMBER
1654	

NOTIFICATION DATE	DELIVERY MODE
02/01/2012	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTO-PAT-Email@rfem.com

Office Action Summary	Application No.	Applicant(s)	
	09/772,445	KLEINMAN ET AL.	
	Examiner	Art Unit	
	RONALD NIEBAUER	1654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 December 2011*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

5)☒ Claim(s) *295-324* is/are pending in the application.

5a) Of the above claim(s) *299-300,303,305-308,311-312,316,323* is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) *295-298,301,302,304,309,310,313-315,317-322 and 324* is/are rejected.

8)☐ Claim(s) _____ is/are objected to.

9)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

10)☒ The specification is objected to by the Examiner.

11)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

12)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Applicants amendments and arguments filed 12/5/11 are acknowledged and have been fully considered. Any rejection and/or objection not specifically addressed is herein withdrawn based on applicants amendments and arguments.

Previously, applicant elected group 1 (claims 1-40,47-49,53-61,133-136) (11/5/04) and elected a species comprising amino acids LKKTET (2/24/05) for the wound healing polypeptide. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Due to the addition of new claims an additional election of species requirement was sent 1/6/09.

Applicant's election of the following species:

Patient population: skin wound

Further agent: transforming growth factor beta

Further excipient: sterile water

in the reply filed on 2/5/09 is acknowledged.

In the instant case, each of the elected species were found in the prior art. In particular the peptide thymosin beta 4 comprises LKKTET. Any art that was found in the course of searching for the elected species that reads on non-elected species is also cited herein. In accord with section 803.02 of the MPEP the Markush-type claims and the claims to the elected species are

rejected and claims to the nonelected species are held withdrawn from consideration. In accord with section 803.02 of the MPEP the search is not extended unnecessarily to cover all species.

Claims 1-295 have been cancelled.

Claims 316,323 are to a species of further excipient other than the elected agents, claims 299-300,303,305-308,311-312 is to a patient population other than the elected patient population.

Claims 299-300,303,305-308,311-312,316,323 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 2/5/09.

Claims 295-298,301-302,304,309-310,313-315,317-322,324 are under consideration.

Specification

The disclosure is objected to because of the following informalities:

37 CFR 1.821(d) states that: Where the description or claims of a patent application discuss a sequence that is set forth in the "Sequence Listing " in accordance with paragraph (c) of this section, reference must be made to the sequence by use of the sequence identifier, preceded by "SEQ ID NO: " in the text of the description or claims, even if the sequence is also embedded in the text of the description or claims of the patent application.

In the instant case, applicants have provided a sequence listing. However, each occurrence of the sequences is not preceded by "SEQ ID NO: " as required by 37 CFR 1.821(d). For example see figure 11a the last sequence.

Appropriate correction is required.

Response to Arguments Specification

Applicants argue (page 11) that a replacement figure 11a has been submitted.

Applicant's arguments filed 12/5/11 have been fully considered but they are not persuasive.

Although Applicants argue (page 11) that a replacement figure 11a has been submitted, Figure 11a shows 14 separate sequences. However, only 13 SEQ IDs are shown. The last sequence is missing the corresponding sequence identifier.

Priority

The art cited in the rejections is proper prior art whether or not the provisional application fully supports the instant claims. It is noted that a cursory review of the provisional application does not reveal the word/phrases 'corneal damage' (see claim 310), 'cofilin' (see claim 317) or 'osmotic pump' (see claim 318).

Claim Rejections - 35 USC § 112

This is a new rejection necessitated by applicants amendments.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 313,319 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 313 recites the limitation "the site of the wound" in claim 295. There is insufficient antecedent basis for this limitation in the claim. Thus the scope of the claim is unclear.

Claim 319 recites the limitation "said composition" in claim 295. There is insufficient antecedent basis for this limitation in the claim. Thus the scope of the claim is unclear.

Although unclear (see 112 2nd) the claims have been given the broadest reasonable interpretation. Claim 313 has been interpreted as referring to contacting tissue or a wound. Claim 319 has been interpreted as referring to a composition or to TB4.

Claim Rejections - 35 USC § 102

This rejection is a new rejection necessitated by applicants amendments

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 295-297,301-302,304,310,313-315,324 are rejected under 35 U.S.C. 102(b) as being anticipated by Esteve MM ('An active complex for prevention of skin aging' Drug and Cosmetic Industry Sept 1992 10 pages as retrieved from STN database) as evidenced by Horecker (US 4,388,234).

Esteve teach compositions containing thymus extract from bovines that contains thymosine (page 5 first complete paragraph). Esteve teach that the active complex containing the thymus extract was included in a formulation whose main purpose is to help repair modifications of the internal structure of skin cells effected by UV radiation (page 5 2nd to last paragraph). Esteve teach that the composition was applied to the face of women (page 7 first paragraph).

Horecker teach that thymus extract contains thymosin beta4 (column 1 lines 14-26). Horecker is cited as evidence that the thymus extract of Esteve contains thymosin beta4 (see MPEP 2124). Horecker teach that thymus extract contains thymosin alpha-1 (column 1 lines 14-26). Horecker is cited as evidence that the thymus extract of Esteve contains thymosin alpha-1 (see MPEP 2124).

In relation to the instant claims, since Esteve teach compositions comprising thymus extract which contains thymosin beta 4 Esteve teach the active agent of the instant claims. Since Esteve teach administration to the skin of women to repair modifications of skin cells affected by UV radiation Esteve teach targeting cells (i.e. skin cells) and administration as recited in the instant claims 295-297,301-302,310. Since Esteve teach that the treatment accelerates self repair (page 5 2nd to last paragraph) Esteve teach effective amounts as claimed as in claim 324. Esteve teach compositions comprising thymus extract which contains thymosin alpha 1 thus meeting the limitations of claim 313 (compare original claim 12). Esteve teach carriers such as water (page 5) as recited in claim 314. Esteve teach a cream (page 5) as in claim 315.

It is noted that claim 304 recites ‘synthetic' TB4. There is no evidence that ‘synthetic’ TB4 is structurally distinct from TB4. Further, Esteve teach the source as bovine, thus the protein

was synthesized in a bovine. Thus the limitations of claim 304 are met absent evidence to the contrary.

Although unclear (see 112 2nd) the claims have been given the broadest reasonable interpretation. Claim 313 has been interpreted as referring to contacting tissue or a wound. Claim 319 has been interpreted as referring to a composition or to TB4.

Claim Rejections - 35 USC § 103

Claims were previously rejected based on the references cited below. Since the claims have been amended the rejection is updated to correspond to the instant claims.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 295-298,301-302,304,309-310,313-315,317-322,324 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goldstein et al (US 5,578,570) and Lai (US 5,358,703) and Palladino et al (US 5,055,447).

Goldstein teach treating septic shock by administering thymosin beta 4 (abstract).

Goldstein does not reduce to practice using topical administrations. Goldstein does not teach in a single embodiment the use of transforming growth factor beta.

Goldstein teach treating septic shock by administering thymosin beta 4 (abstract). Goldstein teach that septic shock is widely disseminated in many areas of the body and is generally disseminated from one tissue to another (column 1 lines 24-27). Goldstein expressly teach administration to those in which a sepsis cascade is occurring (claim 1).

Lai teach (column 1 lines 41-45) that septic shock is manifested by tissue damage. Lai is cited to show that those with septic shock are in need of tissue repair.

Goldstein teach treating septic shock. In order to address the problem one would be motivated to use other known techniques of treating septic shock as expressly suggested by Goldstein (column 4 line 33-50). Pallidino teach treating septic shock by administering transforming growth factor beta (claim 1). Thus one would be motivated to administer such agent to those with septic shock. Further, Pallidino teach that those with septic shock ordinarily experience skin lesions (column 5 lines 45-47). Thus one would be motivated to treat the skin lesions thus meeting the limitations recited in the instant claims.

Taken together, Goldstein teach that septic shock is widely disseminated in many areas of the body and is generally disseminated from one tissue to another (column 1 lines 24-27). Goldstein expressly teach topical administration (column 2 line 53, column 3 lines 33-38). Further, Lai teach (column 1 lines 41-45) that septic shock is manifested by tissue damage. Pallidino teach that those with septic shock ordinarily experience skin lesions (column 5 lines 45-47). Thus one would be motivated to treat the skin lesions as recited in claims 309-310. By administering the thymosin beta 4 topically as suggested by Goldstein one would necessarily be targeting cells (i.e. skin cells). Goldstein teach administration of thymosin beta4 (claim 1) to humans (claim 2) in a dose of 0.4-4 mg/kg (claim 4) where the agent is administered topically or intravenously (claim 6) or for parenteral administration (column 2 line 53) thus meeting the active step of claims 295-298,301-302,318,320. Further, Palladino recognize intraperitoneal administration (column 6 line 56) as in claim 319. Goldstein teach the use of synthetic Tbeta4 (column 4 lines 61-64) thus one would be motivated to use such form as recited in claim 304 for example. Goldstein teach compositions containing sterile water (column 4 line 4) and the use of gels (column 3 line 40) thus one would be motivated to use such compositions thus meeting the limitations as recited in claims 314-315,321-322 for example.

Goldstein expressly teach dosages of 0.4 - 4 mg per kg of body weight (claim 3) (for an average 70 kg person the dose is 28-280 mg). Further, it would have been obvious to one skilled in the art at the time of invention to determine all optimum and operable conditions (e.g.dosages), because such conditions are art-recognized result-effective variables that are routinely determined and optimized in the art through routine experimentation. ("[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the

optimum or workable ranges by routine experimentation." *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). *See* MPEP § 2144.05).

Lai teach (column 1 lines 41-45) that septic shock is manifested by tissue damage. Lai is cited to show that those with septic shock are in need of tissue repair.

Goldstein teach treating septic shock. In order to address the problem one would be motivated to use other known techniques of treating septic shock. Pallidino teach treating septic shock by administering transforming growth factor beta (claim 1). Thus one would be motivated to administer such agent to those with septic shock as recited in claims 317 for example. Further, Pallidino teach that those with septic shock ordinarily experiences skin lesions (column 5 lines 45-47). Thus one would be motivated to treat the skin lesions thus meeting the limitations recited in the instant claims.

In the instant case, one would be motivated to address the problem of treating septic shock as set forth by Goldstein by using the methods expressly suggested by Goldstein. Since Goldstein expressly claim methods of treating one would have a reasonable expectation of success. Since Pallidino also teach methods of treating septic shock one would be motivated to use such teachings to address the problem of treating septic shock with a reasonable expectation of success.

It is noted that certain claims refer to properties (revitalize, accelerate repair). Since Goldstein teach the claimed agent at the claimed amounts there is a reasonable basis that all claim limitations (including claim 324) are met absence evidence to the contrary.

From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention.

Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references.

Although unclear (see 112 2nd) the claims have been given the broadest reasonable interpretation. Claim 313 has been interpreted as referring to contacting tissue or a wound. Claim 319 has been interpreted as referring to a composition or to TB4.

Response to Arguments 103

Applicants argue (pages 17-20) that Goldstein does not teach targeting cells as claimed.

Applicants argue that there is no expectation that the subjects of Goldstein had septic shock or tissue damage.

Applicants argue that Lai refer to hypotension.

Applicants argue that there is a burden to prove that a reference has an enabled disclosure.

Applicants argue that there is no reason to carry out the claimed process with an expectation of success.

Applicant's arguments filed 12/5/11 have been fully considered but they are not persuasive.

Although Applicants argue (pages 17-20) that Goldstein does not teach targeting cells as claimed, Goldstein expressly teach topical administration (column 2 line 53, column 3 lines 33-38) thus Goldstein teach targeting cells. Further, Lai teach (column 1 lines 41-45) that septic shock is manifested by tissue damage. Pallidino teach that those with septic shock ordinarily

experiences skin lesions (column 5 lines 45-47). Thus one would be motivated to treat the skin lesions.

Although Applicants argue that there is no expectation that the subjects of Goldstein had septic shock or tissue damage, Claim 1 of Goldstein expressly states 'in which a sepsis cascade is occurring'. Goldstein expressly refers to 'during sepsis' (column 2 lines 18-26) and obstructing the progression of sepsis (claim 1).

Although Applicants argue that Lai refer to hypotension, it is noted that the instant claims do not refer to hypotension. Thus whether or not Lai teach hypotension appears to be irrelevant to the instant rejection.

Although Applicants argue that there is a burden to prove that a reference has an enabled disclosure, MPEP 2121 states that prior art is presumed enabled. It is noted that Goldstein is an issued patent. If applicants (i.e. Goldstein is listed as an inventor of the instant application) are of the position that their own issued patent is not valid applicants may provide evidence of such. Further, Goldstein provides details of the proposed mechanism (column 2) and working examples (examples 1-5).

Although Applicants argue that there is no reason to carry out the claimed process with an expectation of success, Goldstein teach treating septic shock by administering thymosin beta 4 (abstract) thus one would be motivated to treat such patients with an expectation of success. Goldstein teach that septic shock is widely disseminated in many areas of the body and is generally disseminated from one tissue to another (column 1 lines 24-27). Goldstein expressly teach topical administration (column 2 line 53, column 3 lines 33-38). Further, Lai teach (column 1 lines 41-45) that septic shock is manifested by tissue damage. Pallidino teach that those with

septic shock ordinarily experiences skin lesions (column 5 lines 45-47). Thus one would be motivated to treat the skin lesions

Double Patenting

It is noted that application 12938228 is a divisional of copending US Serial No. 09/772,445. The restriction requirement for 09/772,445 was mailed 10/5/04. The instant claims of 12938228 are not consonant with the restriction requirement of 10/5/04. Thus in accord with MPEP 804.01(b) the prohibition against double patenting does not apply to US Serial No. 09/772,445.

Claims were previously rejected based on double patenting. The rejections have been updated to correspond to the instant claims.

The terminal disclaimer filed on 9/17/08 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US 7,268,118 has been reviewed and is accepted. The terminal disclaimer has been recorded.

The terminal disclaimer filed on 9/17/08 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of any patent granted on 11/284,430 has been reviewed and is accepted. The terminal disclaimer has been recorded.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection

is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 295-297,301-302,304,310,313-315,317,321,324 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 48-73 of copending Application No. 11/284,408 ('408). Although the conflicting claims are not identical, they are not patentably distinct from each other because the '408 application teaches methods of administering compositions to skin comprising thymosin beta four (for example, claim 48), transforming growth factor (claim 53), and a vehicle (claim 48) for topical treatment (for example, claim 52) in the form of a lotion (claim 72). '408 teach the administration to improve skin appearance and is applied to thinning skin (claim 53,70) and for wound repair (title) thus one would be motivated to administer (i.e. target) to those of the instant claims. Taken together, the limitations of claims set forth above are met.

It is noted that certain claims recite properties. Since '408 teach the elected agent (i.e. thymosin beta 4) which is recited in the claims the claim limitations are met (see also MPEP

2112.01). It is noted that the claims refer to effective amounts. Since '408 expressly teach amounts (claim 48-49) and methods for improving the appearance of the skin (claim 53) the amounts are effective.

Although unclear (see 112 2nd) the claims have been given the broadest reasonable interpretation. Claim 313 has been interpreted as referring to contacting tissue or a wound. Claim 319 has been interpreted as referring to a composition or to TB4.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 295-297,301-302,304,310,313-315,321,324 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 13-23,26 of copending Application No. 11/917,869 ('869). Although the conflicting claims are not identical, they are not patentably distinct from each other because the '869 application teaches methods of administering compositions to the skin comprising thymosin beta four isoform or LKKTET (for example, claim 13,21), and a stimulating agent (claim 13), and a carrier (claim 17), and teach the composition as a lotion (claim 20), and teach specific doses (claim 23). The method is for treating tissue and injured or damaged skin thus one would be motivated to treat (i.e. target) the patients as in the instant claims.

It is noted that certain claims recite properties. Since '869 teach the elected agent (i.e. thymosin beta 4) which is recited in the claims the claim limitations are met (see also MPEP 2112.01).

Although unclear (see 112 2nd) the claims have been given the broadest reasonable interpretation. Claim 313 has been interpreted as referring to contacting tissue or a wound. Claim 319 has been interpreted as referring to a composition or to TB4.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 295-297,301-302,304,310,314-315,321,324 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 21-32 of copending Application No. 11/715,997 ('997). Although the conflicting claims are not identical, they are not patentably distinct from each other because the '997 application teaches methods of administering compositions to the skin comprising thymosin beta four or LKKTET (for example, claim 21), and specific doses (claim 27), and as a lotion (claim 22), and with a carrier (claim 23). The method is for treating tissue and injured or damaged skin (i.e. targeting) thus one would be motivated to treat the patients as in the instant claims.

It is noted that certain claims recite properties. Since '997 teach the elected agent (i.e. thymosin beta 4) which is recited in the claims the claim limitations are met (see also MPEP 2112.01).

Although unclear (see 112 2nd) the claims have been given the broadest reasonable interpretation. Claim 313 has been interpreted as referring to contacting tissue or a wound. Claim 319 has been interpreted as referring to a composition or to TB4.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 295-297,301-302,304,310,314-315,321,324 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-25 of copending Application No. 12/444,331 ('331). Although the conflicting claims are not identical, they are not patentably distinct from each other because the '331 application teaches methods of administering compositions to the skin comprising thymosin beta four or LKKTET (for example, claim 1), and specific doses (claim 7), and lotions as a form (claim 11).The method is for treating tissue and injured or damaged skin thus one would be motivated to treat (i.e. target) the patients as in the instant claims.

It is noted that certain claims recite properties. Since '331 teach the elected agent (i.e. thymosin beta 4) which is recited in the claims the claim limitations are met (see also MPEP 2112.01).

Although unclear (see 112 2nd) the claims have been given the broadest reasonable interpretation. Claim 313 has been interpreted as referring to contacting tissue or a wound. Claim 319 has been interpreted as referring to a composition or to TB4.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 295-298,301-302,304,309-310,313-315,317-322,324 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-20 of U.S. Patent No. 5,578,570 (Goldstein) and Lai (US 5,358,703) and Palladino et al (US 5,055,447).

Goldstein teach treating septic shock by administering thymosin beta 4 (abstract). Goldstein teach administration of thymosin beta4 (claim 1) to humans (claim 2) in a dose of 0.4-4 mg/kg (claim 4) where the agent is administered intravenously (claim 6). Lai teach (column 1 lines 41-45) that septic shock is manifested by tissue damage. Lai is cited to show that those with septic shock are in need of tissue repair.

Lai teach (column 1 lines 41-45) that septic shock is manifested by tissue damage. Lai is cited to show that those with septic shock are in need of tissue repair. Goldstein teach treating septic shock. In order to address the problem one would be motivated to use other known techniques of treating septic shock as expressly suggested by Goldstein. Pallidino teach treating septic shock by administering transforming growth factor beta (claim 1). Thus one would be motivated to administer such agent to those with septic shock as recited in claims 258 for example. Further, Pallidino teach that those with septic shock ordinarily experience skin lesions (column 5 lines 45-47). Thus one would be motivated to treat the skin lesions thus meeting the limitations recited in the instant claims.

Taken together, Goldstein teach that septic shock is widely disseminated in many areas of the body and is generally disseminated from one tissue to another (column 1 lines 24-27). Goldstein expressly teach topical administration (column 2 line 53, column 3 lines 33-38). Further, Lai teach (column 1 lines 41-45) that septic shock is manifested by tissue damage. Pallidino teach that those with septic shock ordinarily experience skin lesions (column 5 lines 45-47). Thus one would be motivated to treat the skin lesions as recited in claims 309-310. By administering the thymosin beta 4 topically as suggested by Goldstein one would necessarily be targeting cells (i.e. skin cells). Goldstein teach administration of thymosin beta4 (claim 1) to

humans (claim 2) in a dose of 0.4-4 mg/kg (claim 4) where the agent is administered topically or intravenously (claim 6) or for parenteral administration (column 2 line 53) thus meeting the active step of claims 295-298,301-302,318,320. Further, Palladino recognize intraperitoneal administration (column 6 line 56) as in claim 319. Goldstein teach the use of synthetic Tbeta4 (column 4 lines 61-64) thus one would be motivated to use such form as recited in claim 304 for example. Goldstein teach compositions containing sterile water (column 4 line 4) and the use of gels (column 3 line 40) thus one would be motivated to use such compositions thus meeting the limitations as recited in claims 314-315,321-322 for example.

Goldstein expressly teach dosages of 0.4 - 4 mg per kg of body weight (claim 3) (for an average 70 kg person the dose is 28-280 mg). Further, it would have been obvious to one skilled in the art at the time of invention to determine all optimum and operable conditions (e.g.dosages), because such conditions are art-recognized result-effective variables that are routinely determined and optimized in the art through routine experimentation. ("[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). *See* MPEP § 2144.05).

Lai teach (column 1 lines 41-45) that septic shock is manifested by tissue damage. Lai is cited to show that those with septic shock are in need of tissue repair.

Goldstein teach treating septic shock. In order to address the problem one would be motivated to use other known techniques of treating septic shock. Pallidino teach treating septic shock by administering transforming growth factor beta (claim 1). Thus one would be motivated to administer such agent to those with septic shock as recited in claims 317 for example. Further,

Pallidino teach that those with septic shock ordinarily experience skin lesions (column 5 lines 45-47). Thus one would be motivated to treat the skin lesions thus meeting the limitations recited in the instant claims.

Although unclear (see 112 2nd) the claims have been given the broadest reasonable interpretation. Claim 313 has been interpreted as referring to contacting tissue or a wound. Claim 319 has been interpreted as referring to a composition or to TB4.

Claims 295,297,301,304,314,320,324 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-21 of copending Application No. 12/938,228 ('228). Although the conflicting claims are not identical, they are not patentably distinct from each other because the '228 application teaches methods of administering compositions to injured tissue comprising thymosin beta (for example, claim 1) by direct administration (claim 6) to heart tissue (i.e. target heart tissue).

It is noted that certain claims recite properties. Since '228 teach the elected agent (i.e. thymosin beta 4) which is recited in the claims the claim limitations are met (see also MPEP 2112.01).

Although unclear (see 112 2nd) the claims have been given the broadest reasonable interpretation. Claim 313 has been interpreted as referring to contacting tissue or a wound. Claim 319 has been interpreted as referring to a composition or to TB4.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 295,298,301,304,314,324 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-29 of copending Application No. 12/160,720 (720). Although the conflicting claims are not identical, they are not patentably distinct from each other.

720 teach administration of compositions comprising thymosin beta 4 (claim 1), systemically and directly to coronary tissue (claims 3-4) for treating tissue damage in specific patients (claim 10,18) in specific amounts (claim 25).

It is noted that certain claims recite properties. Since '228 teach the elected agent (i.e. thymosin beta 4) which is recited in the claims the claim limitations are met (see also MPEP 2112.01).

Although unclear (see 112 2nd) the claims have been given the broadest reasonable interpretation. Claim 313 has been interpreted as referring to contacting tissue or a wound. Claim 319 has been interpreted as referring to a composition or to TB4.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims are directed to an invention not patentably distinct from claims of commonly assigned applications/patents as discussed above.

The U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP Chapter 2300). Commonly assigned applicants/patents discussed above, discussed above, would form the basis

for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(e), (f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the assignee can, under 35 U.S.C. 103(c) and 37 CFR 1.78(c), either show that the conflicting inventions were commonly owned at the time the invention in this application was made, or name the prior inventor of the conflicting subject matter.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g), or 35 U.S.C. 102(e) for applications pending on or after December 10, 2004.

Response to Arguments double patenting

Applicants request (page 12) that the rejections be held in abeyance.

Applicant's arguments filed 12/5/11 have been fully considered but they are not persuasive.

Although Applicants request (page 12) that the rejections be held in abeyance, such request is not adequate to overcome the rejections. The rejections have not been overcome.

Prior art of record

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Malinda et al (Faseb Journal 1997 cited in IDS 5/25/01). Malinda teach that TB4 is important in angiogenesis and that the formation of blood vessels is an important part of wound healing (page 480). Malinda teach that others report that TB4 could play a major role in would healing (page 480). Malinda recognizes the use of in vivo experiments (abstract).

Baumann et al 1997 (from 'Thymic peptides in preclinical and clinical medicine: an update;proceedings of the 2nd international thymus symposium' editor HR Maurer, pages 13-17; cited previously). Baumann (Table II page 21) also teach that TB4 leads to an increase in wound healing in vitro.

Biotech Patent News (Dec 1 1997 1 page, cited previously). Biotech Patent News teach that investigators will use thymosin beta 4 (last paragraph) in a wound healing study.

Goldstein et al (cited 2/21/08 ref 14). Goldstein teach tissue regeneration via thymosin (title).

Bilton (WO 84/02274) - Bilton teach compositions for wound healing (title) including those that include thymus concentrate (claim 1, example 1).

Conclusion

Applicants amendments have necessitated any new grounds of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RONALD NIEBAUER whose telephone number is (571)270-3059. The examiner can normally be reached on Monday-Thursday, 7:30am-5:00pm, alt. Friday, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cecilia Tsang can be reached on 571-272-0562. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ronald T Niebauer/
Examiner, Art Unit 1654

/Cecilia J Tsang/
Supervisory Patent Examiner, Art Unit 1654